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ABSTRACT

A study examined grades on speech assignments in a college public speaking course as a function of students' preferred learning strategies and expressed learning motives. Subjects, 112 undergraduate students enrolled in the basic public speaking course, had their levels of communication apprehension and motives for learning measured early in the semester. Their levels of speech anxiety associated with speech giving were measured. Four learning strategy preferences and two learning motives were treated in separate analyses as independent variables to determine their effects on students' grades for three different public speaking assignments. Communication apprehension and public speaking anxiety were included as possible confounding variables. Grades were found to be differentially affected by learning strategy preferences depending on the speech assignment, and communication anxiety played only a minor role in these effects. Learning motives had no appreciable effects on students' speech grades. Findings suggest that different speech assignments were affected variously by different learning strategies. Communication educators and researchers should consider more earnestly the impact of learning strategy choices and implementation on students' fulfillment of oral communication tasks and assignments. (Contains 32 references and 3 tables of data.) (RS)

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Students' Grades on Public Speaking Assignments as a Function of Learning Strategies and Motives

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Students' Grades on Public Speaking Assignments as a Function of Learning Strategies and Motives

Abstract

Questions of how students go about preparing for public speaking assignments and what motivates them to do so have received virtually no attention from communication researchers. This paper argues that answering such questions can lead to better planning and implementation of public speaking assignments and better understanding of student acquisition of oral communication competencies. A model of learning strategies is described along with a model of learning motives, and the implications of both for students of public speaking are explained. Four learning strategy preferences and two learning motives were treated in separate analyses as independent variables to determine their effects on students' grades for three different public speaking assignments. Communication apprehension and public speaking anxiety were included as possible confounding variables. Grades were found to be differentially affected by learning strategy preferences depending on the speech assignment, and communication anxiety played only a minor role in these effects. Learning motives had no appreciable effects on students' speech grades. Findings are discussed with respect to differences in the speech assignments and the demands they placed on students. Implications for communication education and future research are offered.

Students' Grades on Public Speaking Assignments

as a Function of Learning Strategies and Motives

Among the goals of teaching public speaking are to sharpen students' oral communication skills, increase their critical thinking abilities, and enhance their value for and participation in the democratic process (Allen, Willmington, & Sprague, 1991; Lucas, 1990). For reaching these goals, Lucas (1990) recommends the incremental, experience-based approach to teaching public speaking, whereby each consecutive speech assignment places greater demands on students' oral communication knowledge and skills. He further notes that success with this approach necessitates students be given enough time between speech assignments to learn the principles and skills that are specific to each assignment. Speculatively, most college and university teachers of public speaking probably adhere to the approach Lucas extols and in so doing probably provide students sufficient criteria and time to prepare for each assignment. A question worthy of consideration, however, that has received little if any attention in the literature, is that of how students use their time between assignments. In particular, what do students do on their own to prepare for speech assignments? The question is both theoretical -- we assume that oral communication is learned (students' onus) as well as taught (teacher's onus), but know more about how the latter is done than the former; and pedagogical -- what teachers offer students in class will in part determine what students do out of class (see Sprague, 1993 for a related discussion).

The theoretical side of the question alluded to above implicates the construct of communication competence. Models of communication competence stipulate that competent communication activity involves enacting a repertoire of effective communication skills based on a knowledge of the appropriate skills to use at the time and sufficient motivation to perform them well (Rubin, 1990a; Sptizberg, 1988; Richmond & McCroskey, 1985). All three components of communication competence stand at the center of teaching public speaking. Yet, aside from looking at students' acquisition and use of precise oral communication principles and skills conventionally associated with effective public speaking, communication educators and

researchers have done little to determine what students do to prepare themselves for a speech assignment and what motivates them to do so. In particular, we know virtually nothing about how students' motivations and efforts to use their communication knowledge and skills affect their outcomes on classroom assessments (Gorham, 1990). In the case of public speaking courses, the question arises as to how differences in students' motivations for learning and learning strategy preferences relate to their grades on speech assignments.

The purpose of this study was to examine grades on speech assignments in a college public speaking course as a function of students' preferred learning strategies and expressed learning motives. Also, because previous research has shown students' communication performance to be debilitated by communication anxiety, measures of communication apprehesnion and speech anxiety were treated as potential confounding variables. The rationale for this study rests with the fact that individual differences in students' approaches to learning will, at least partially, determine their learning outcomes (Biggs, 1979; Dillon & Schmeck, 1983) and that such effects can be expected to occur in the communication classroom just as in any classroom (Gorham, 1990). Isolating those effects can eventually help communication educators better state their objectives and better plan their activities for public speaking instruction.

Learning Strategies

Many researchers have made attempts to explain the different strategies students employ when trying to accomplish academic tasks (Biggs, 1984; 1988; Mayer, 1988; Schmeck, Ribich, & Ramanaiah, 1977; Schmeck, 1983; Schmeck, 1988a; 1988b). Whereas not all academic tasks can be completed by employing the same strategy everytime, most students are likely to favor one particular strategy over others to handle many different academic tasks. Hence, differences in students' grades on a given task may be due in part to differences in students' preferences for learning strategies used for the task. Gorham (1990) provides a good overview of some of these approaches that are relevant to the communication classroom. We review some others here.

Learning strategies employed by students generally fit into either comprehensive or shallow approaches to accomplishing a task (Biggs, 1979; 1987; Entwistle, Hanley & Hounsell, 1979; Pask, 1976). The student who takes the comprehensive approach is concerned more with obtaining information than with merely completing the assignment. Conversely, the student who chooses the shallow approach is less likely to be concerned with the potential to gain knowledge and more interested in simply completing the task.

The literature on individual differences in learning provides many parallel concepts to the comprehensive and shallow approaches. Pask (1976) differentiated holist and serialist learners. Holist learners like to consider many related aspects of a topic. They examine concepts or tasks on the whole, bringing together all their various parts but not focusing specifically on the individual components. On the other hand, serialist learners focus on specific components of a whole but are not as able to determine how the components fit together in a larger scheme.

Entwistle et. al. (1979) determined that students learn for meaning, reproducing, or achieving. The meaning-oriented learner searches for a better understanding of the subject and will generally utilize some comprehensive method to accomplish a learning task. This learner's motivation to complete tasks derives from a personal desire to increase understanding. A reproducing-oriented learner often chooses a shallow method, such as memorization, to complete learning tasks. This student's primary motivation is likely the fear of possible failure. The achieving-oriented learner is concerned with successful task completion without being bound to one specific method of acquisition. Rather, this learner uses both comprehensive and shallow methods depending on which is most appropriate for the task at hand. Quite similar to Entwistle et. al.'s (1979) categories of learning strategies are Biggs' (1979) internalizing, utilizing, and achieving approaches, respectively.

Schmeck, Ribich, and Ramanaiah (1977) developed the Inventory of Learning Processes (ILP) to assess learning behaviors and conceptual processes characteristic of college students (Schmeck, 1983). This approach extends beyond the comprehensive/shallow distinction to

four general learning strategy preferences that differentiate students' approaches to task completion: deep processing, methodical study, fact retention, and elaborative processing. Deep processing refers to "the extent to which students critically evaluate, conceptually organize, and compare and contrast the information they study" (Schmeck, 1983, p. 245). Methodical study is utilization of systematic study practices such as outlining a reading text or taking practice tests. Fact retention is the use of memorization and rote recall of details. Elaborative processing is the method by which students "translate new information into their own terminology, generate concrete examples from their own experience, apply new information to their own lives, and use visual imagery to encode new ideas" (Schmeck, 1983, p. 248).

Of the various approaches to learning strategies reviewed here, the ILP seems the more complete approach for explaining and assessing student differences in learning preferences by virtue of the finer distinctions it makes among four methods of study. Further, the ILP is unique in that it was designed to assess the learning strategies of college students. Schmeck's (1983) approach is therefore the one adopted for the present study, and because this study concerned public speaking performance by college students, the results of two previous studies relating the ILP to student learning outcomes are noteworthy.

Schmeck and Grove (1979) found deep processing, fact retention, and elaborative processing to significantly relate to students' grade point averages and scores on the American College Testing examination. Lockhart and Schmeck (1983) sought the best predictors of student performance on tests, papers, and computer programming assignments. They found deep processing and fact retention were the better predictors of test scores, methodical study the better predictor of scores on the computer assignment, and methodical study and deep processing the better predictors on the writing assignment. Similar differences among the four types of strategies could accrue in predicting students' outcomes on public speaking assignments.

Learning Motives

A learning motive may be defined as a students' general motivation for accomplishing academic tasks (Eison, 1981; Eison, Pollio, & Milton, 1986; Janzow & Eison, 1990). As such,

"motive" can refer to the general reasons why a student wants to learn and perform academically. An approach to learning motives deemed most applicable to the present study is that developed by Eison, Pollio, and Milton (1983) who believe students are motivated to perform academically for either of two reasons: To obtain a better understanding (learning oriented) or to receive an acceptable grade (grade oriented).

Eison et. al. (1983) developed a conceptual and measurement scheme termed LOGO II to assess the degree to which students are either "motivated to learn" (learning oriented) or "motivated to earn" (grade oriented). Learning oriented students view college courses as an "opportunity to acquire knowledge and obtain personal enlightenment" whereas grade oriented students view course grades as "sufficient reason for being, and doing, in college (Janzow & Eison, 1990, p. 94). Studies using the LOGO II instrument have shown grade orientation and learning orientation to be differentially related to other student factors that are themselves predictive of student outcomes. Eison (1982) found that learning oriented students, when compared to grade oriented students, "were more trusting, imaginative, self-sufficient and relaxed; had better study habits; [and] experienced less debilitating anxiety" (p. 868). Johnson and Beck (1988) observed that students with lower SAT scores were more grade oriented than were their higher achieving counterparts.

Communication Anxiety as a Factor

The primary objective of this study was to determine the influence of college students' learning strategy preferences and learning motives on their speech assignment grades in a public speaking course. To fully meet this objective, it was thought necessary to control for the potential effects of communication anxiety on speech assignment grades. For example, Beatty (1986) showed that higher levels of speaking anxiety were associated with speaking for shorter duration. Beatty (1987) also found that when public speaking students were given an option as to how they wished to display knowledge of course material, high CAs opted to avoid giving a presentation and preferred either to take an exam or write an essay. Beatty (1988) later showed that higher CA students make poorer decisions about the use of different speech

elements, such as introductions. An early study confirmed that students experiencing higher levels of public speaking anxiety often emit disruptive, awkward, or inappropriate verbal and nonverbal behaviors (Mulac & Sherman, 1974). Finally, communication anxiety has also been shown to relate positively to the number of errors made in recalling information (Stafford & Daly, 1984), suggesting that more anxious speakers might have difficulty recalling information during a speech. Generally, the behavioral and cognitive disruptions associated with high levels of communication anxiety may be strong enough to produce significant differences in students' speech grades, thus masking any real differences in grades due to students' learning strategy preferences and learning motives. Alternatively, it is possible that combining communication anxiety with learning strategy preferences and motives can account for more of the variation in students' speech grades than can the latter set of factors alone.

Rationale and Research Questions

In order to better prepare students to be more competent communicators, there exists the need to determine how differences in students' learning strategies and motivations can impact their levels of communication performance. The various strategies students utilize to complete speech related academic tasks and the motivations which guide them in completing those tasks may well account for significant variation in their speech making outcomes. For example, in terms of learning strategies, most communication educators would expect students who emerse themselves in a speech making assignment, (e.g., deep processing strategies) to make a better grade on the assignment than would students who simply worked to meet the minimum requirements of the assignment (e.g., fact retention strategies). With respect to learning motives, students motivated to obtain a particular grade may be satisfied to perform at a minimal level and obtain the commensurate grade. On the other hand, students motivated by the value of increased knowledge and experience might perform at higher levels because of their genuine interest in learning something new and the attendant motivation to do well at what's new. These possibilities have meaningful practical implications for communication educators. Instructors who are able to determine what affects students' speech making will be better

equipped to help students reach higher levels of competence as speakers. Instructors may learn that specific tasks are accomplished best by using certain strategies or motives. With such information, instructors can create tasks involving students' use of specific strategies for specific motives. Given these possibilities and the primary objective of this study, the following research questions were posed:

RQ1a: To what extent are variations in students' speech grades accounted for by students' learning strategy preferences (fact retention, methodical study, elaborative processing, or deep processing)?

RQ1b: Can the variance in speech grades due to learning strategy preferences be increased by controlling for communication apprehension and speech anxiety?

RQ2a: To what extent are variations in students' speech grades accounted for by students' learning oriented versus grade oriented motives?

RQ2b: Can the variance in speech grades due to learning motives be increased by controlling for communication apprehension and speech anxiety?

Method

Participants

Two hundred fifteen undergraduate students enrolled in the basic public speaking course at _____ comprised the original sample for this study. Because of student attrition and incomplete data over the term of the study, an actual n of 112 student data sets was usable. Participation in the study was voluntary and nonremunerated.

Measurement

Learning Strategy Preferences. Students' learning strategy preferences were operationalized by data from the Inventory of Learning Processes (ILP) as developed by Schmeck et. al. (1977) to assess "dimensions of learning behavior and conceptual processes characteristic of college students" (Schmeck, 1983, p. 245). The ILP consists of 62 items grouped into four factors. Each factor offers statements characteristic of different strategies students use to complete academic tasks. The Deep Processing factor comprises 18 items

tapping students' critical evaluation, conceptual organization, and relational analysis of information they study. The Elaborative Processing factor contains 14 items referring to students' use of paraphrasing, application to own experiences, and visualization of new applications as they study new material. The Fact Retention factor consists of 7 items tapping students' use of mnemonic and memorization strategies for remembering factual information. The fourth factor, Methodical Study, consists of 23 items referring to the use of basic study routines characteristic of many "how to" study manuals, such as outlining, highlighting, and previewing material to be learned. All of the ILP items were presented to students in a Likert-type format using a Strongly Agree (5) to Strongly Disagree (1) response format. Factors were scored separately so that higher scores indicated greater reliance on the particular strategies represented by the factor.

Learning Motives. The LOGO II (Eison et. al., 1983) was used to measure students' primary learning motive. The instrument consists of 32 Likert-type statements characterizing behavioral and attitudinal attributes reflecting either a grade oriented or learning oriented approach to handling academic tasks. The LOGO II scales consists of 8 items relating to learning oriented behaviors and 8 items relating to learning oriented attitudes, and two other sets of 8 items relating to grade oriented behaviors and attitudes. Students responded to the 16 behavior items on a scale of Never (1) to Always (5) and the 16 attitudinal items on a scale of (1) Strongly Agree to (5) Strongly Disagree.

Communication Apprehension and Public Speaking Anxiety. The PRCA-24 (McCroskey, 1982) was used to measure students' levels of communication apprehension, used as a covariate in answer to the research questions. Public Speaking Anxiety was measured using a 5-item version of the STAI state anxiety scale (Beatty, 1987; 1988; Beatty, Forst, & Stewart, 1986), employing a 5-step Likert-type response format.

Speech Grades. The dependent variable in this study was students' grades on three separate speech assignments. Letter grades were recorded by students' instructors. These were

recoded to a 4-point scale for data analysis purposes. All instructors used a standardized departmental speech evaluation form for each assignment.

Procedures.

The PRCA-24 and the LOGO II were administered early in the semester to assess students' levels of communication apprehenison and motives for learning, respectively. Their levels of speech anxiety associated with speech giving were measured after the first and the third speech assignments. The ILP was administered late in the semester so that students would be able to reflect on the strategies they employed to accomplish previous assignments over the term.

The first speech assignment was designed primarily to get students involved in the speechmaking process. Criteria emphasized organization and support of main ideas and use of a natural delivery style. It was to be presented within 3 minutes. The second speech asignment was presented as a formal informative speech of 5 to 6 minutes in duration. It emphasized the same criteria as the first assignment but in more detail. The third speech assignment was a persuasive speech to be given in a 4 to 6 minute time period. It emphasized the same details of organization and delivery as the second speech along with use of a persuasive message strategy. The speech assignments were designed to be incremental in nature, with each one requiring use of material and principles needed in the previous one.

Results

Preliminary Analyses

Means, standard deviations, and reliabilities for motivation for learning, learning strategy preferences, speaking anxiety, and communication apprehension are shown in Table 1. Reliabilities were computed using Cronbach's alpha coefficient. Obtained reliabilities on all the measures resemble those found in other studies. Mean learning motive scores did not differ significantly between those students classified as learning oriented (M=46.23) and those classified as grade oriented (M=44.35; t=1.68, p=.10). Thus, students were not any more motivated by the opportunity to learn than by the opportunity to receive a desired grade.

Students' learning strategy preferences were predominately fact retention (M=3.60) followed by deep processing (M=3.43), elaborative processing (M=3.37), and methodical study (M=2.79). Fact retention was significantly higher than deep processing (t=3.33, p=.001), elaborative processing (t=3.56, p=.005), and methodical study (t=11.60, p=.0001). Deep processing was equivalent to elaborative processing (t=1.06, p=.29), but both were significantly preferred over methodcal study (t's=9.62 and 10.71, p's = .0001, respectively).

Analyses were computed to determine if the differences in mean scores for public speaking anxity were significant between the first and third speeches. Results indicated that students experienced more anxiety prior to the first speech (M=19.08) than to the third speech (M=16.77; t=4.63, p=.001).

Means and standard deviations for grades on the first, second, and third speeches are shown in Table 2. Grades were significantly higher for the third speech (M=3.17) than for the second speech (M=2.86; t=4.30, p<.001) and the first speech (M=2.98; t=2.63, p=.01). Grades on the first and second speeches were not significantly different (t=1.69, p=>09).

To determine if there existed any differential instructor influence on students' speech grades, chi-square analyses were computed for each of the three speeches. A significant teacher effect (x^2=25.10, df=10, p=.005) was obtained for the first speech. The difference is due to a disproportionate assignment of "B's" by all instructors for the first speech. There were no significant instructor effects for the second or third speeches. Very important to note, however, is that, categorically, only three grades were represented in the data: A, B, and C. Either instructors were by-and-large unwilling to rate students at below-average levels on their speeches, or the actual below-average performers were among the number of students who exited the course or provided incomplete data.

Pearson correlations among all variables are reported in Table 3. Significant correlations reveal that students motivated to learn for grade reasons had a tendency to perform poorly on the third presentation. Deep processing was positively associated with grades on the first and thrid speeches. Fact retention also related positively with grades on the third speech.

Communication apprehension related negatively to grades on the first presentation, while public speaking anxiety correlated negatively with grades on the third presentation. Students motivated by a learning orientation tended to be more methodical and elaborative in their strategies. Grade oriented students, by contrast, showed no significant preferences for any learning strategy but did show a tendency for shallow processing (r=-.21 with deep processing).

Anxiety measures had few significant correlations with learning strategy preferences and no relationships with learning motivations. Speech anxiety for the third speech was negatively related to deep processing, indicating that deeper processors of public speaking information were less anxious about the assignment. Communication apprehension was also negatively associated with deep processing, suggesting that CA students tended to approach studying for speech assignments in a more shallow fashion.

Research Questions

Questions regarding the impact of learning strategies on speech grades were addressed using multiple regression procedures. Each speech grade served as the criterion in separate analyses using the four learning strategies as predictors (RQ1a). A second set of analyses was done with the relevant anxiety variables included as additional predictors to determine any change in the influence of learning strategies on speech grades due to anxiety (RQ1b). For the first speech, deep processing emerged as the only significant contributor to grades [F(1,106)=8.91, p=.004, R2=.08; Beta=.28, t=2.99, p=.004]. The results were identical when communication apprehension and speech anxiety for the first speech were included as predictors. Hence, communication anxiety was not as important in determining grades on the first speech as was the learning strategy involving deep processing of information.

For the second speech, a significant regression model emerged involving elaborative processing, fact retention, and methodical study [F(3,106)=2.68, p=.05, R2=.07], but only methodical study contributed significantly to the grade at the .05 level (Beta=-.23, t=-2.14,

p=.03). Neither communication apprehension nor speech anxiety scores for the first speech altered this model when included in the prediction equation.

The regression model for the third speech was significant [F(2,106)=5.20, p=.007, R2=.09] including the variables of deep processing and fact retention. However, neither predictor was significant at the .05 level, although fact retention was significant at the .10 level (Beta=.19, t=1.79, p=.08). When communication apprehension and speech anxiety scores were included as predicators, the model was significant [F(2,106)=6.82, p=.002, R2=.12] and fact retention emerged as a significant contributor to grades on the third speech (Beta=.25, t=2.65, p=.009) along with speech anxiety on the third speech (Beta=-.22, t=-2.36, p=.02). In other words, those students who got the higher grades on the third speech were students who used fact retention as a learning strategy and who were more confident in giving the speech.

Questions regarding the influence of learning motives on speech grades were addressed through analysis of variance procedures. Each speech grade served as the dependent variable in separate analyses using LOGO II classifications as the independent variable (RQ2a). Low and high learning orientation and low and high grade orientation groups were created by splitting the respective scale distributions at the median (LO mdn=45, GO mdn=44). For the first speech there were no significant differences among high and low learning oriented and grade oriented students [F(3,111)=1.00, p=.73]. A similar result obtained for the second speech [F(3,110)=1.13, p=.34] and for the third speech [F(3,108)=1.47, p=.23]. Thus, considering learning motives alone, students did not vary significantly in their grades on any of the three speeches. Inclusion of communication apprehension scores and speech anxiety scores as covariates in similar analyses (RQ2b) produced marginally significant results for only the third speech [F(6, 107)=1.87, p=.09, R2=.10]. This result was due to a significant difference in grades on the third speech between low (M=3.31) and high (M=3.02) grade-oriented learners [F(1,107)=4.01, p=.05]. Differences in learning motivations had no substantial impact on students' speech grades, but when communication anxiety was controlled

for, there emerged a tendency for students with a lesser grade orientation to have higher speech grades on a latter assignment than students with a stronger grade motivation.

Discussion

The purpose of this study was to assess the extent to which students' learning strategies and learning motives influenced grades on public speaking assignments in a basic public speaking course. Additionally, students' communication apprehension and speech anxiety were treated as confounding variables since they have been shown repeatedly to negatively affect public speaking performance (Beatty, 1988). The effects of learning strategies and learning motives were examined separately for three different speech assignments. The study was deemed necessary because of the lack of information regarding how students' study and preparation preferences impact their in-class making of speeches.

Learning strategies were found to contribute significantly to students' speech grades, but the effects varied according to the nature of the speech assignment. On the first speech, higher grades were solely a function of deep processing learning strategies. This indicates that students who organized, evaluated, and compared and contrasted information learned about and used for their speeches, were the more successful on the first speech. Important to note is that the first speech assignment was this group of students' first encounter with public speaking in the course and counted for a sizeable portion of their final grades. Schmeck et. al. (1977) determined deep processing to be associated with performance outcomes involving basic or novice level tasks. This suggests that deep processing could be considered the more successful learning strategy when there is unfamiliarity with and uncertainty about the task.

Although communication anxiety would be expected to have a significant impact on speech outcomes, its effect on grades for the first speech in this study was nonsignificant. This may be accounted for by considering that deep procesing strategies can help to control anxiety. Schmeck and Ribich (1978) found deep processing to be negatively related to measures of anxiety associated with a learning task. In the present case, deep processing was also found to be negatively related to both communication apprehension and state anxiety.

For the second speech, there was a significant negative impact on grades due to the methodical study strategy. This indicates that students performed at lower levels when they employed methodical strategies. It is possible that students utilizing such strategies appeared less "natural" in their speech presentation, if indeed presentation carried over from study and preparation practices, since methodical strategies involve mechanical, highly structured techniques (e.g., rote rehearsal, emphasis on surface details, etc.). A less natural presentation violated criteria for the second speech and would thereby lead to a lower evaluation grade. It may also be that deep processing strategies used for the first speech gave students a feeling of adequate preparation for the second speech since both speeches shared several evaluation criteria, thus enticing students to merely skim the additional criteria required for the second speech rather than engage in more thorough study of them.

As with the first speech, there was no significant impact due to either anxiety variable on grades for the second speech. By the second speech, students had gained familiarity with task requirements and contextual constraints associated with giving speeches in the class so that debilitative anxiety had become less likely. Although anxiety data were not collected for the second speech, a significant reduction in speech anxiety was observed between the first and third speeches.

Grades on the third speech were significantly affected by both the fact retention learning strategy and speech anxiety. The third speaking assignment required more ability of students than did the first two assignments. Students needed to not only display knowledge of all previously learned elements of public speaking but also all newly learned elements of persuasive speaking. As such, the assignment required students to recall and implement all information of the course relevant to the speaking assignments and incorporate it into the final assignment. It is not surprising, then, that students' preference for recalling previously learned principles and procedures as a method of preparation impacted grades on this assignment. Moreover, the increased difficulty of the third assignment and its close proximity to the end of the semester can account for the increased impact of state anxiety on grades in this

instance. Hawkins and Stewart (1990) found a similar effect on a group presentation assignment near the end of a semester. These findings give a strong hint to the possibility that students utilized a "cramming" technique in preparing for the final speech assignment, just as they might prepare for an exam.

Whereas students' learning strategy preferences had some effect on their public speaking grades, learning motives, distinguished as learning oriented versus grade oriented, had essentially no impact on speech grades. A look at the sample means for the separate LO ($\underline{M}$=46.23) and GO ($\underline{M}$=44.35) scales sheds some light here. The means are equivalent and fall in the middle of the theoretical range for each scale (theoretical midpoint = 48). This indicates only a moderate level for both motives and a lack of substantial variation between them. In other words, neither motive was of greater importance than the other. This is consistent with previous work using the LOGO II (Eison et. al., 1983) which showed few differences between the two orientations. Rather, it was found in that research that more differences occurred between high and low levels within each orientation. Such was the case in this study regarding a tendency for students with a lesser grade orientation to receive higher grades on the third speech than students with a stronger grade orientation. Speculatively, this difference is explainable by high grade oriented students' over-concern with the evaluative outcome of the speech assignment and insufficient concern with task relevant procedures. Finally, learning motives may be embedded within learning strategy preferences. For example, students who employed an elaborative processing strategy were more likely to have been motivated for learning reasons moreso than for grade reasons, by virtue of the significant correlation found between elaborative processing and learning orientation.

Limitations

The foregoing findings and explanations given for them should be considered tentative at best, due to several limiting factors in the procedures of this study. One factor is the large degree of attrition by students from the initial sample. Because the sample of data was restricted to only those students who completed the course and provided complete sets of

measures, it is not known what learning strategy preferences, learning motives, and levels of communication anxiety would have been represented in the missing sample. Those students could very well have preferred learning strategies and exhibited motives quite different from the obtained sample. Communication anxiety may have played a factor in their attrition, leaving the obtained sample skewed with respect to anxiety scores.

Another limitation was the minimal variation in speech grades. The dependent variable for all analyses reflected a restricted range of 2 to 4 (grades of C, B, and A). This restriction may be attributable to the attrition rate or to instructor leniency in grading the speeches (e.g., Rubin, 1990b). Since there was not an equivalent number of "bad" grades reported, this study does not address the strategies, motives, and anxiety of students who might regularly perform at lower levels in a public speaking class. The grade "C" is commonly considered average, so this study has addressed only those students who performed at levels of average and above. As a consequence, correlations and differences may have been deflated. Rather than converting obtained letter grades to some arbitrary numerical scale, an extension of this study should rely on actual scores obtained from individual speech evaluations, which should increase the variablity in the dependent variable.

Another limitation concerns the timing of administering the learning strategy and learning motive questionnaires. Learning strategies were measured at semester's end while learning motives were assessed at the beginning of the semester. A more reliable procedure for a future study to consider would be to collect both kinds of data at the completion of each speech assignment, with relevant items reflecting directly on that assignment.

Implications

Generally, learning strategy preferences tended to be a better predictor of students' speech grades than either students' motivation for learning or their anxiety about communicating. Hence, although these findings are preliminary and not without notable limitations, communication educators and researchers should consider more earnestly the

impact of learning strategy choices and implementation on students' fulfillment of oral communication tasks and assignments (Gorham, 1990).

A helpful finding of this study for communication educators is that different speech assignments were affected variously by different learning strategies. This highlights the importance of cognitive processes in the acquisition and use of communication concepts, principles, and procedures. Current thinking about communication competence corresponds to this apparent role of cognitive processes in learning about communication, but neither the competence literature nor the communication education literature has provided communication educators much insight into how students can more effectively learn the information they are taught. Therefore, it might be worthwhile to begin considering ways to incorporate learning strategy models into communication curriculum and instruction. For example, if future research were to confirm the role of deep processing strategies to students' success on early speech assignments, then public speaking teachers would need to present the assignment itself in such a way as to invoke students' deep processing. This might be accomplished by comparing a model of a successfully organized speech to one of a poorly organized speech.

Results of this study raise questions that can guide future research in the area of classroom oral presentations. What specific strategies do students engage in to prepare their speech assignments? What procedural changes do they make in preparing for subsequent assignments? What principles and concepts presented in class and textbooks do students adhere to most closely when preparing their presentations? Are students who adhere closely to classroom and textbook principles of speech preparation more or less successful on assignments than those who prepare more independently and innovatively? In addressing questions such as these, researchers should consider new models and constructs of communication competence that consider skill acquisition as well as existing repertoires of communication knowledge and skills (Spitzberg, 1988; Rubin, 1990a).

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Table 1

Means, Standard Deviations, and Reliabilities of Independent Variables

Variable	Mean	Std. Dev.	Reliability
LRNOR	46.23	7.34	.75
GRADOR	44.35	7.20	.69
DEEP	3.43	.54	.84
METH	2.79	.53	.84
ELAB	3.37	.52	.79
FACT	3.60	.54	.65
STATE1	19.08	4.07	.88
STATE2	16.77	4.42	.89
COMAPP	64.50	16.20	.84

Note: LRNOR=Learning Orientation, GRADOR=Grade Orientation, DEEP=Deep Processing, METH=Methodical Study, ELAB=Elaborative Processing, FACT=Fact Retention, STATE1=Level of Situational Anxiety on First Speech, STATE2=Level of Situational Anxiety on Third Speech, COMAPP=Communication Apprehension

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Table 2

Means and Standard Deviations for Speech1, Speech2, and Speech3 Grades

Variable	Mean	Std. Dev.
Speech1	2.98	.66
Speech2	2.86	.64
Speech3	3.17	.71

Note: *n*=112; one person did not report grade for Speech2 (*n*=111), and three did not report grades for Speech3 (*n*=109)

Table 3

Pearson Correlations Among the Variables

	1	2	3	4	5	6	7	8	9	10	11	12
1) LO	--											
2) GO	-33	--										
3) DP	21	-24	--									
4) MS	40	-15	14	--								
5) FR	07	08	53	05	--							
6) EP	39	-05	34	40	18	--						
7) SA1	04	00	-11	-08	-02	00	--					
8) SA2	07	09	-20	-10	-08	-11	23	--				
9) CA	-17	14	-43	-16	-19	-27	42	31	--			
10) S1	11	-12	28	04	13	04	-07	-17	-20	--		
11) S2	-13	-09	11	-12	17	09	-14	-12	-15	26	--	
12) S3	13	-19	25	13	27	-00	-10	-23	-17	31	31	--

Note: Correlations > .18 are significant at $p<.05$.
LO=Learning Orientation, GO=Grade Orientation, DP=Deep Processing, MS=Methodical Study, FR=Fact Retention, EP=Elaborative Processing, SA1=Level of Situational Anxiety Prior to First Speech, SA2=Level of Situational Anxiety Prior to Second Speech, CA=Communication Apprehension, S1=Grade on First Speech, S2=Grade on Second Speech, S3=Grade on Third Speech. Decimals are omitted to enhance clarity of table.

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